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|  | **Nitrates**  **Directive**  **Derogation**  **Fertilisation**  **Plan** | | | C:\Users\0856643\Desktop\Pic 2 - Amended.jpg |
| **Year:** |  |  |
| For Northern Ireland farmers operating under the requirements of the Nitrates Directive Derogation from the livestock manure limit of 170kg Nitrogen per hectare per year. | | |
|  | | | | |

**This document may be made available in alternative formats; please contact us to discuss your requirements:-**

|  |  |
| --- | --- |
| DARD Countryside Management Unit  Lindesay Hall, Loughry Campus  Loughry  Cookstown  Co Tyrone  BT80 9AA  Telephone: 028 8675 7507  Textphone: 0845 30 44 511  Fax: 028 8675 7511  Email: [cmbenquiries@dardni.gov.uk](mailto:cmbenquiries@dardni.gov.uk) | DOE Northern Ireland Environment Agency  Water Management Unit  17 Antrim Road  Lisburn  Co Antrim  BT28 3AL  Telephone: 028 9262 3188  e-mail: [WaterInfo@doeni.gov.uk](mailto:WaterInfo@doeni.gov.uk) |

You can download this Fertilisation Plan from our websites. Follow this link: [www.dardni.gov.uk/publications/nitrates-directive-derogation-information-2015-2018](http://www.dardni.gov.uk/publications/nitrates-directive-derogation-information-2015-2018) or: [www.doeni.gov.uk/articles/nitrates-directive](http://www.doeni.gov.uk/articles/nitrates-directive)

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This is an example format of a **fertilisation plan for Nitrates Directive derogated farms**. The information can be presented in other formats if preferred, for example a print out from the relevant CAFRE farm nutrient calculators, available at [www.dardni.gov.uk](http://www.dardni.gov.uk) and follow the link for ‘Online Services’ will supply most of the information required.

The fertilisation plan must be kept up to date on the farm. This plan is not submitted to NIEA. It must be prepared and made available for inspection on farm by 1 March of the current calendar year.

Please refer to the Nitrates Directive Derogation Guidance Booklet 2015-2018 for additional information.

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** |
|  |  |

**Table 1: Livestock manure nitrogen (N) and phosphorus (P) to be produced by dairy cattle per year**

Only complete this table if you keep these livestock.

1. Multiply the planned number of livestock in column (A) by the N produced/head/year column (B). Enter total in column (C).
2. Multiply the planned number of livestock in column (A) by the P produced/head/year column (D). Enter total in column (E).
3. Total the N produced/year in column (C).
4. Total the P produced/year in column (E).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned average**  **per year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Dairy Cattle** | **(A)** | **(B)** | **(C)** (A)x(B) | **(D)** | **(E)** (A)x(D) |
| Dairy cow |  | 91 |  | 17 |  |
| Dairy heifer (over 2 years) |  | 54 |  | 10 |  |
| Dairy heifer (1-2 years) |  | 47 |  | 7.9 |  |
| Breeding bull |  | 54 |  | 10 |  |
| **Dairy calves:-**  to prevent the same animal being counted twice use either “0-1 year” **OR** “0-6 months” and/or “6-12 months” categories. | | | | | |
| 0-1 year |  | 19 |  | 4.7 |  |
| **OR** | | | | | |
| 6-12 months |  | 12 |  | 3.0 |  |
| 0-6 months |  | 7 |  | 1.7 |  |
|  | | **Total N produced from dairy cattle** | **=** | **Total P produced from dairy cattle** | **=** |

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |
|  |  |

**Table 2: Livestock manure nitrogen (N) and phosphorus (P) to be produced by beef cattle per year**

Only complete this table if you keep these livestock.

1. Multiply the planned number of livestock in column (A) by the N produced/head/year column (B). Enter total in column (C).
2. Multiply the planned number of livestock in column (A) by the P produced/head/year column (D). Enter total in column (E).
3. Total the N produced/year in column (C).
4. Total the P produced/year in column (E).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned average**  **per year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Beef cattle** | **(A)** | **(B)** | **(C)** (A)x(B) | **(D)** | **(E)** (A)x(D) |
| Suckler cows |  | 54 |  | 10 |  |
| Cattle (over 2 years) |  | 54 |  | 10 |  |
| Cattle (1-2 years) |  | 47 |  | 7.9 |  |
| Breeding bull |  | 54 |  | 10 |  |
| **Beef calves:-**  to prevent the same animal being counted twice use either “0-1 year” **OR** “0-6 months” and/or “6-12 months” categories. | | | | | |
| 0-1 year |  | 19 |  | 4.7 |  |
| **OR** | | | | | |
| 6-12 months |  | 12 |  | 3.0 |  |
| 0-6 months |  | 7 |  | 1.7 |  |
| **Bull beef calves:-**  to prevent the same animal being counted twice use either “0-13.5 months” **OR** “0-6 months” and /or “6-13.5 months” categories. | | | | | |
| 0-13.5 months |  | 30 |  | 7.5 |  |
| **OR** | | | | | |
| 6-13.5 months |  | 23 |  | 5.8 |  |
| 0-6 months | Use beef calves 0-6 months | | | | |
|  | | **Total N produced from beef cattle** | **=** | **Total P produced from beef cattle** | **=** |

|  |  |
| --- | --- |
| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 3: Livestock manure nitrogen (N) and phosphorus (P) to be produced by sheep per year**

Only complete this table if you keep these livestock.

1. Multiply the planned number of livestock in column (A) by the N produced/head/year column (B). Enter total in column (C).
2. Multiply the planned number of livestock in column (A) by the P produced head/year column (D). Enter total in column (E).
3. Total the N produced in column (C).
4. Total the P produced in column (E).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned average**  **per year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Sheep** | **(A)** | **(B)** | **(C)** (A)x(B) | **(D)** | **(E)** (A)x(D) |
| Ewe (over 1 year) |  | 9 |  | 1.0 |  |
| Ram (over 1 year) |  | 9 |  | 1.0 |  |
| **Lambs:-**  to prevent the same animal being counted twice use either “0-1 year” **OR** “0-6 months” and/or “6-12 months” categories. | | | | | |
| 0-1 year |  | 4.4 |  | 0.6 |  |
| **OR** | | | | | |
| 6-12 months |  | 3.2 |  | 0.3 |  |
| 0-6 months |  | 1.2 |  | 0.3 |  |
|  | | **Total N produced from sheep** | **=** | **Total P produced from sheep** | **=** |

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 4: Livestock manure nitrogen (N) and phosphorus (P) to be produced by deer and goats per year**

Only complete this table if you keep these livestock.

1. Multiply the planned number of livestock in column (A) by the P produced/head/year column (B). Enter total in column (E).
2. Multiply the planned number of livestock in column (A) by the P produced/head/year column (D). Enter total in column (E)
3. Total the N produced/year in column (C).
4. Total the P produced/year in column (E).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned average**  **per year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Deer** | **(A)** | **(B)** | **(C)** (A)x(B) | **(D)** | **(E)** (A)x(D) |
| Deer (red) over 2 years |  | 25 |  | 4 |  |
| Deer (red) 6 months–2 years |  | 13 |  | 2 |  |
| Deer (fallow) over 2 years |  | 13 |  | 2 |  |
| Deer (fallow) 6 months–2 years |  | 7 |  | 1 |  |
| Deer (sika) over 2 years |  | 10 |  | 2 |  |
| Deer (sika) 6 months–2 years |  | 6 |  | 1 |  |
| **Goats** | | | | | |
| Milking goat |  | 15 |  | 1.7 |  |
| Non-milking goat |  | 9 |  | 1.0 |  |
| **Kids:-**  to prevent the same animal being counted twice use either “0-1 year” **OR** “0-6 months” and/or “6-12 months” categories. | | | | | |
| 0–1 year |  | 4.4 |  | 0.6 |  |
| **OR** | | | | | |
| 6–12 months |  | 3.2 |  | 0.3 |  |
| 0–6 months |  | 1.2 |  | 0.3 |  |
|  | | **Total N produced from deer/goats** | **=** | **Total P produced from deer/goats** | **=** |

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| --- | --- |
| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 5: Livestock manure nitrogen (N) and phosphorus (P) to be produced by horses per year**

Only complete this table if you keep these livestock.

1. Multiply the planned number of livestock in column (A) by the N produced/head/year column (B). Enter total in column (C).
2. Multiply the planned number of livestock in column (A) by the P produced/head/year column (D). Enter total in column (E).
3. Total the N produced/year in column (C).
4. Total the P produced/year in column (E).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned average**  **per year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Horses** | **(A)** | **(B)** | **(C)**  (A)x(B) | **(D)** | **(E)**  (A)x(D) |
| Horse > 3 years old |  | 50 |  | 9 |  |
| Horse 2-3 years old |  | 44 |  | 8 |  |
| Horse 1-2 years old |  | 36 |  | 6 |  |
| Horse foal < 1 year old |  | 25 |  | 3 |  |
| Donkey/small pony |  | 30 |  | 5 |  |
|  | | **Total N produced from horses** | **=** | **Total P produced from horses** | **=** |

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Tables 6 and 7: Planned livestock numbers and livestock manure nitrogen (N) and phosphorus (P) to be produced by pigs per year**

Only complete if you keep these livestock.

Select from either “Units with breeding stock only” or “Units with growing/finishing pigs only”, depending on your production system.

**Table 6: Planned livestock numbers and livestock manure nitrogen (N) and phosphorus (P) to be produced by units with breeding stock only per year**

1. Only complete the table below if you keep the pig types shown. This includes sows, gilts, boars and pigs from weaning to sale/transfer or slaughter.
2. Enter the planned average number of pigs on the unit at any one time in column A.
3. Enter the planned total number of pigs to be sold/transferred off the unit in the year for each weight range in Column F. You can select more than one weight.
4. Multiply the planned number per year by the N and P produced per year.
5. Total the N produced/year in column (C).
6. Total the P produced/year in column (E).

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 6: Planned livestock numbers and livestock manure nitrogen (N) and phosphorus (P) to be produced by units with breeding stock only per year** (continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Units with breeding stock ONLY** | | | | | | |
| **Planned average**  **number on unit**  **per year1** | **N produced per head per year**  **(kg N)** | **Total N produced**  **(kg per year)** | | **P produced per head per year**  **(kg P)** | | **Total P produced**  **(kg per year)** |
| **Pigs** | **(A)** | **(B)** | **(C)** (A)x(B) | | **(D)** | | **(E)** (A)x(D) |
| Boars1 |  | 18 |  | | 4.2 | |  |
| Maiden gilts1 |  | 11 |  | | 5.7 | |  |
| Lactating sows2, dry sows, served gilts1 |  | 16 |  | | 8.7 | |  |
| **Sale/transfer weight of pigs**  **(kg)** | **Planned number**  **sold/transferred**  **per year** | **N produced per head per year**  **(kg N)** | **Total N produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | | **Total P**  **produced**  **(kg P per year)** | |
|  | **(F)** | **(B)** | **(C)** (F)x(B) | **(D)** | | **(E)** (F)x(D) | |
| 18 |  | 0.09 |  | 0.08 | |  | |
| 35 |  | 0.38 |  | 0.23 | |  | |
| 105 |  | 2.38 |  | 1.09 | |  | |
|  |  | **Total N produced from pig breeding stock** | **=** | **Total P produced from pig breeding stock** | | **=** | |

1 Average number on the unit at any one time and not the total number entering the herd.

2Lactating sow figure includes suckling pigs to weaning.

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 7: Planned livestock numbers and livestock manure nitrogen (N) and phosphorus (P) to be produced by units with growing/finishing pigs only per year**

1. Only complete the table below if you just finish pigs and do not have breeding stock.

2. Enter the planned number of pigs to be sold or sent to slaughter in the year in Column A.

3. Multiply the planned number per year by the N and P produced per year.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Units with growing/finishing pigs ONLY** | | | | |
| **Planned average**  **number to be sold or**  **sent to slaughter per**  **year** | **N produced per**  **Head per year**  **(kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per**  **Head per year**  **(kg P)** | **Total P produced**  **(kg per year)** |
| **Pigs** | **A** | **B** | **(C)** (A)x(B) | **(D)** | **(E)** (A)x(D) |
| 7 kg-18 kg |  | 0.09 |  | 0.08 |  |
| 7 kg-35 kg |  | 0.38 |  | 0.23 |  |
| 7 kg-105 kg |  | 2.38 |  | 1.09 |  |
| 18 kg-3 5kg |  | 0.29 |  | 0.15 |  |
| 18 kg–105 kg |  | 2.30 |  | 1.00 |  |
| 35 kg–105 kg |  | 2.00 |  | 0.85 |  |
|  | | **Total N produced from growing/ finishing pig units** | **=** | **Total P produced from growing/ finishing pig units** | **=** |

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Tables 8 & 9: Livestock manure nitrogen (N) and phosphorus (P) to be produced by poultry per year**

Only complete this table if you keep these livestock.

1. Select either Table 8 or Table 9 depending on your production system.
2. Enter either the number of birds produced on your farm per year in column A, Table 8 or the unit capacity in column C, Table 9.
3. If using Table 9 enter the number of weeks occupancy in Column B and multiply this by the unit capacity (A) to give the planned number of birds produced per year (C).
4. Multiply the number of birds by the N and P produced per 1,000 birds.
5. Total the N produced/year in the appropriate column.
6. Total the P produced/year in the appropriate column.

**Table 8**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Planned number of**  **birds produced**  **per year** | **N produced/**  **1,000 birds**  **(kg N)** | **Total N**  **produced**  **(kg/year)** | **P produced/**  **1,000 birds**  **(kg P)** | **Total P**  **produced**  **(kg/year)** |
| **Poultry** | **(C)** | **(D)** | **(E)**  (C)x(D) | **(F)** | **(G)**  (C)x(F) |
| Broilers (1,000s) |  | 40 |  | 8.4 |  |
| Male turkeys (1,000s) |  | 611 |  | 254 |  |
| Female turkeys (1,000s) |  | 363 |  | 104 |  |
| Fattening ducks (1,000s) |  | 139 |  | 65 |  |
|  | | **Total N produced from poultry** | **=** | **Total P produced from poultry** | **=** |

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| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Livestock type** | **Unit Capacity (1,000s)** | **No of weeks occupancy** | **Planned number of**  **birds produced**  **per year** | **N produced per**  **1,000 birds per week (kg N)** | **Total N**  **produced**  **(kg per year)** | **P produced per 1,000 birds per week (kg P)** | **Total P**  **produced**  **(kg per year)** |
| **Poultry** | **(A)** | **(B)** | **(C)**  (A)x(B) | **(D** | **(E)**  (C)x(D) | **(F)** | **(G)**  (C)x(F) |
| Broiler breeders (1,000s)  0-18 wks |  |  |  | 5.9 |  | 2.1 |  |
| Broiler breeders (1,000s)  18-60 wks |  |  |  | 21 |  | 7.6 |  |
| Broiler breeders (1,000s)  0-60 wks |  |  |  | 19 |  | 6.8 |  |
| Pullets (1,000s) |  |  |  | 5.7 |  | 2.1 |  |
| Layers (1,000s) |  |  |  | 12 |  | 4.6 |  |
|  | | | | **Total N produced from poultry** | **=** | **Total P produced from poultry** | **=** |

**Table 9: Livestock manure nitrogen (N) and phosphorus (P) to be produced by poultry per year** (continued)

|  |  |
| --- | --- |
| **1** | **Planned average stock numbers and livestock manure nitrogen and phosphorus produced on-farm** (continued) |

**Table 10: Nitrogen (N) and phosphorus (P) produced from livestock manure**

Transferring the answers from the relevant pages enter the amount of livestock manure N and P from each of the enterprises on your farm.

|  |  |  |
| --- | --- | --- |
|  | **N produced**  **(kg per year)** | **P produced**  **(kg per year)** |
| Dairy cattle livestock manure (total from page 2) |  |  |
| Beef cattle livestock manure (total from page 3) | + | + |
| Sheep livestock manure (total from page 4) | + | + |
| Deer and goat livestock manure (total from page 5) | + | + |
| Horse livestock manure (total from page 6) | + | + |
| Pig livestock manure (total from page 7 and 9) | + | + |
| Poultry livestock manure (total from page 10 and 11) | + | + |
|  | = | = |
| **Total for all enterprises** | **(Total N produced kg per year)** | **(Total P produced kg per year)** |

Remember you can use the CAFRE farm nutrient calculators, available at [www.dardni.gov.uk](http://www.dardni.gov.uk) to do these calculations.

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| **2** | **Organic manure planned to be imported and exported** |
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1. Only complete this part if manure is to be imported/exported to or from your farm.
2. Select the type of slurry/manure and dry matter (DM) and insert the volume or tonnage. Typical DM is 6% for cattle slurry and 4% for pig slurry.

|  |  |  |
| --- | --- | --- |
| **Slurry type** | **Imported volume (m3)** | **Exported volume (m3)** |
|  |  |  |
| Cattle slurry – 2%DM |  |  |
| **Cattle slurry – 6%DM** |  |  |
| Cattle slurry – 10%DM |  |  |
| Pig slurry – 2%DM |  |  |
| **Pig slurry – 4%DM** |  |  |
| Pig slurry – 6%DM |  |  |
| Separated cattle slurry (liquid portion):- |  |  |
| - Strainer box |  |  |
| - Weeping wall |  |  |
| - Mechanical separator |  |  |
| Separated pig slurry (liquid portion) |  |  |
| Other (e.g. digestate) |  |  |

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| --- | --- | --- |
| **Manure type** | **Imported quantity (tones)** | **Exported quantity (tones)** |
|  |  |  |
| Cattle FYM – 25% DM |  |  |
| Sheep manure FYM – 25% DM |  |  |
| Pig manure FYM – 25% DM |  |  |
| Broiler litter – 66%DM |  |  |
| Layer manure – 30% DM |  |  |
| Turkey litter – 60% DM |  |  |
| Duck manure – 25% DM |  |  |
| Horse manure FYM – 30% DM |  |  |
| Goat manure FYM – 25% DM |  |  |
| Spent mushroom compost |  |  |
| Separated cattle slurry (solid portion) |  |  |
| Separated pig slurry (solid portion) |  |  |
| Other |  |  |

**1m3 = 220 gallons**

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| --- | --- |
| **3** | **Map of Farm** |

Provide a farm map which shows the following:-

* the field areas;
* crops grown in each field;
* crop grown last year if this year’s crop is arable;
* Soil Nitrogen Supply (SNS) index for arable crops (refer to the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet Annex H) **or** alternatively a table as below could be completed along with the farm map.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Farm Survey Number** | **Field number** | **Field area (ha)** | **Crop grown**  **this year** | **Previous crop** | **Soil Nitrogen Status**  **(arable fields only except \*N-max crops)** |
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\*N-max crops refer to winter/spring wheat, barley and oats. N-max is an upper limit for high yielding crops. For further information refer to Section 5 below and the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet, Annex I.

(continued)

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| --- | --- |
| **3** | **Map of farm** (continued) |
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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Farm Survey Number** | **Field number** | **Field area (ha)** | **Crop grown**  **this year** | **Previous crop** | **Soil Nitrogen Status**  **(arable fields only except \*N-max crops)** |
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\*N-max crops refer to winter/spring wheat, barley and oats. N-max is an upper limit for high yielding crops. For further information refer to Section 5 below and the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet, Annex I.

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| --- | --- |
| **3** | **Map of farm** (continued) |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Farm Survey Number** | **Field number** | **Field area (ha)** | **Crop grown**  **this year** | **Previous crop** | **Soil Nitrogen Status**  **(arable fields only except \*N-max crops)** |
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\*N-max crops refer to winter/spring wheat, barley and oats. N-max is an upper limit for high yielding crops. For further information refer to Section 5 below and the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet, Annex I.

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| **4** | **Planning the amount of nitrogen to be applied to grassland** |

This will estimate the amount of nitrogen (N) you are likely to apply to the grassland area over the year. If in practice this changes, plans should be amended within seven days.

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| --- | --- |
| **Column (A)** | Enter the total area of grassland. |
| **Column (B)** | Enter the maximum N requirement for your grassland area. |
| **Column (C)** | Enter the type(s) of organic manure, **not including livestock manure,** to be applied. |
| **Column (D)** | Enter in the amount of this organic manure to be applied to the grassland area. |
| **Column (E)** | Enter the available N content of these organic manures (per m3 or tonne of manure) by calculating 40% of the total N content (i.e. multiplying by 0.4) (Annex G of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet, the total N content can be derived from the import licence). For example, sewage sludge with a total N content of 3 kg N per m3 has 1.2 kg available N per m3. |
| **Column (F)** | Multiply columns (D) and (E) to give total amount of available N to be applied in organic manures. |
| **Column (G)** | Enter the type(s) of chemical fertiliser to be applied on grassland during the year. |
| **Column (H)** | Enter the total amount of chemical fertiliser product to be applied for each fertiliser type(s). |
| **Column (I)** | Calculate the amount of N to be applied for all type(s) of chemical fertiliser. For example if 25,000 kg of 27:0:0 is to be applied, kg of N to be applied = 27 x 25,000 ÷ 100 = 6,750 kg of N. |
| **Column (J)** | Add column (F) and (I) to give total N to be applied. |
| **Column (K)** | Divide total in (J) by whole area of grassland (A). Application to be less than requirement in column (B). |

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| **4** | **Planning the amount of nitrogen to be applied to grassland** (continued) |

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| **Nitrogen (N) planning sheet for grassland** | | | | | | | | | | | |
| **Crop details** | | **Organic manure excluding livestock manures  (for example sewage sludge)** | | | | **Chemical N fertiliser** | | | **Organic and chemical**  **N fertiliser** | | **Total N**  **to be**  **applied**  **per ha**  **(kg)**  **Total (J) divided**  **by (A)** |
| **Area of**  **grassland**  **on the**  **farm (ha)** | **N**  **requirement**  **of grassland**  **(kg per ha)** | **Type of**  **manure** | **Total**  **amount**  **of manure**  **to be**  **applied to**  **whole area**  **of grass**  **(m3 or t)** | **Amount of available N (kg per m3 or t)**  **Annex G\*** | **Total**  **amount of available N to be applied to whole area of grass (kg)**  **(D) x (E)** | **Type of N**  **fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to whole**  **area (kg)** | **Total amount**  **of N from fertiliser to**  **be applied**  **to whole**  **area (kg)** | | **Total**  **amount**  **of N to be**  **applied to whole**  **area (kg)**  **(F) + (I)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | | **(J)** | **(K)** |
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Annex G\* refers to Annex G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **4** | **Planning the amount of nitrogen to be applied to grassland** (continued) |

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| **Nitrogen (N) planning sheet for grassland** | | | | | | | | | | | |
| **Crop details** | | **Organic manure excluding livestock manures  (for example sewage sludge)** | | | | **Chemical N fertiliser** | | | **Organic and chemical**  **N fertiliser** | | **Total N**  **to be**  **applied**  **per ha**  **(kg)**  **(J) divided**  **by (A)** |
| **Area of**  **grassland**  **on the**  **farm (ha)** | **N**  **requirement**  **of**  **grassland**  **(kg per ha)** | **Type of**  **manure** | **Total**  **amount**  **of manure**  **to be**  **applied to**  **whole area**  **of grass**  **(m3 or t)** | **Amount**  **of**  **available**  **N (kg per m3 or t)**  **Annex G\*** | **Total**  **amount of available N to be applied to whole area of grass (kg)**  **(D) x (E))** | **Type of N**  **fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to whole**  **area (kg)** | **Total amount**  **of N from fertiliser to**  **be applied**  **to whole**  **area (kg)** | | **Total**  **amount**  **of N to be**  **applied to whole area (kg)**  **(F) + (I)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | | **(J)** | **(K)** |
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|  | | | | | | | | **Total** | |  |  |

Annex G\* refers to Annex G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **5** | **Planning the amount of nitrogen to be applied on N-max crops**  (winter/spring wheat, barley and/or oats) |

In contrast to grassland **all** organic manures must be taken into consideration including livestock manures. N-max is an upper limit of nitrogen (N) that can be applied to crops of winter/spring wheat, barley and oats.

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| --- | --- |
| **Column (A)** | Enter crop type – either winter/spring wheat, barley and/or oats. |
| **Column (B)** | Enter the total area for each crop type to be grown. |
| **Column (C)** | Enter the maximum N requirement for each crop area as per the N-max limit for crop requirement (Annex I of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet) including any adjustment for yield. |
| **Column (D)** | Enter the type(s) of organic manure, **including livestock manure,** to be applied. |
| **Column (E)** | Enter in the amount of manure to be applied. |
| **Column (F)** | Enter the available N content (per m3 or tonne of manure) of the manure to be applied (Annex G of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet). |
| **Column (G)** | Multiply columns (E) and (F) to give total amount of available N to be applied in organic manures. |
| **Column (H)** | Enter the type(s) of chemical fertiliser to be applied. |
| **Column (I)** | Enter the total amount of chemical fertiliser product to be applied for each fertiliser type(s). |
| **Column (J)** | Total up the amount of N to be applied for all type(s) of chemical fertiliser applied. For example if 1,600 kg of 27:0:0 is to be applied, kg of N to be applied = 27 x 1,600 ÷ 100 = 432 kg of N. |
| **Column (K)** | Add column (G) and (J) to give total N to be applied to the area. |
| **Column (L)** | Divide total in (K) by area of crop (B). Application to be less than requirement in column (C). |

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| **5** | **Planning the amount of nitrogen to be applied on N-max crops** (continued) (winter/spring wheat, barley and/or oats) |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nitrogen (N) planning sheet for N-max crops** | | | | | | | | | | | |
| **Crop details** | | | **Organic manure**  **Including livestock manures** | | | | **Chemical nitrogen (N) fertiliser** | | | **Organic**  **and chemical**  **N fertiliser** | **Total N**  **to be applied**  **per ha**  **(kg)**  **Total (K) divided by (B)** |
| **Crop** | **Total area**  **of**  **crop (ha)** | **Crop N-max requirement (kg per ha)**  **Annex I\*** | **Type of manure** | **Total amount**  **of manure**  **to be applied**  **to field(s)**  **(m3 or t)** | **Amount of available N (kg per m3 or t)**  **Annex G\*** | **Total amount of available N to be applied to field(s)**  **(kg)**  **(E) x (F)** | **Type of N fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to field(s)**  **(kg)** | **Total amount**  **of N from fertiliser to be applied to field(s)**  **(kg)** | **Total**  **amount**  **of N to be**  **applied to**  **field(s)**  **(kg)**  **(G)+(J)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** |
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\* refers to Annexes I and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **5** | **Planning the amount of nitrogen to be applied on N-max crops** (continued) (winter/spring wheat, barley and/or oats) |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nitrogen (N) planning sheet for N-max crops** | | | | | | | | | | | |
| **Crop details** | | | **Organic manure**  **Including livestock manures** | | | | **Chemical nitrogen (N) fertiliser** | | | **Organic**  **and chemical**  **N fertiliser** | **Total N**  **to be applied**  **per ha**  **(kg)**  **Total (K) divided by (B)** |
| **Crop** | **Total area**  **of**  **crop (ha)** | **Crop N-max requirement (kg per ha)**  **Annex I\*** | **Type of manure** | **Total amount**  **of manure**  **to be applied**  **to field(s)**  **(m3 or t)** | **Amount of available N (kg per m3 or t)**  **Annex G\*** | **Total amount of available N to be applied to field(s)**  **(kg)**  **(E) x (F)** | **Type of N fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to field(s)**  **(kg)** | **Total amount**  **of N from fertiliser**  **to be applied to field(s)**  **(kg)** | **Total**  **amount**  **of N to be**  **applied to**  **field(s)**  **(kg)**  **(G)+(J)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** |
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\* refers to Annexes I and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **6** | **Planning the amount of nitrogen to be applied on other arable crops (excluding N-max crops and grass)** |

In contrast to grassland **all** organic manures must be taken into consideration including livestock manures.

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| **Column (A)** | Enter crop type from Annex H of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet. |
| **Column (B)** | For each crop area on the farm with the same cropping history enter the soil nitrogen supply (SNS) index as determined per Annex H of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet. |
| **Column (C)** | Enter the area to be grown for each crop type with the same cropping history. |
| **Column (D)** | Enter the maximum N requirement for each crop area (Annex H of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet) taking into consideration the SNS index stated in column B. |
| **Column (E)** | Enter the type(s) of organic manure, **including livestock manure,** to be applied. |
| **Column (F)** | Enter in the amount of manure to be applied. |
| **Column (G)** | Enter the available N content (per m3 or tonne of manure) of the manure to be applied (Annex G of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet). |
| **Column (H)** | Multiply columns (E) and (F) to give total amount of available N to be applied in organic manures. |
| **Column (I)** | Enter the type(s) of chemical fertiliser to be applied. |
| **Column (J)** | Enter the total amount of chemical fertiliser product to be applied for each fertiliser type(s). |
| **Column (K)** | Total up the amount of N to be applied for all type(s) of chemical fertiliser applied. For example if 1,600 kg of 27:0:0 is to be applied, kg of N to be applied = 27 x 1,600 ÷ 100 = 432 kg of N. |
| **Column (L)** | Add column (H) and (K) to give total N to be applied to the area. |
| **Column (M)** | Divide total in (L) by area of crop (C). Application to be less than requirement in column (D). |

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| **6** | **Planning the amount of nitrogen to be applied on other arable crops (excluding N-max crops and grass)** (continued) |

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| **Nitrogen (N) planning sheet for other arable crops (excluding N-max crops and grass)** | | | | | | | | | | | | |
| **Crop details** | | | | **Organic manure**  **Including livestock manures** | | | | **Chemical nitrogen (N) fertiliser** | | | **Organic**  **and chemical**  **N fertiliser** | **Total N**  **to be applied per ha**  **(kg)**  **Total (L) divided by (C)** |
| **Crop** | **SNS** | **Total area of crop (ha)** | **Crop N requirement (kg per ha)**  **Annex H\*** | **Type of manure** | **Total amount**  **of manure**  **to be applied**  **to field(s)**  **(m3 or t)** | **Amount**  **of available N (kg per m3 or t)**  **Annex G\*** | **Total amount of available N to be applied to field(s)**  **(kg)**  **(F)x(G)** | **Type of N**  **fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to field(s)**  **(kg)** | **Total amount**  **of N from fertiliser**  **to be applied**  **to field(s)**  **(kg)** | **Total**  **amount**  **of N to be**  **applied**  **to**  **field(s)**  **(kg)**  **(H)+(K)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** | **(M)** |
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\* refers to Annexes H and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **6** | **Planning the amount of nitrogen to be applied on other arable crops (excluding N-max crops and grass)** (continued) |

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| **Nitrogen (N) planning sheet for other arable crops (excluding N-max crops and grass)** | | | | | | | | | | | | |
| **Crop details** | | | | **Organic manure**  **Including livestock manures** | | | | **Chemical nitrogen (N) fertiliser** | | | **Organic**  **and Chemical**  **N fertiliser** | **Total N**  **to be applied per ha**  **(kg)**  **Total (L) divided by (C)** |
| **Crop** | **SNS** | **Total area of crop (ha)** | **Crop N requirement (kg per ha)**  **Annex H\*** | **Type of manure** | **Total amount**  **of manure**  **to be applied**  **to field(s)**  **(m3 or t)** | **Amount**  **of available N (kg per m3 or t)**  **Annex G\*** | **Total amount**  **of available N to be applied to field(s)**  **(kg)**  **(F)x(G)** | **Type of N**  **fertiliser**  **to be applied** | **Total amount of fertiliser product**  **to be applied**  **to field(s)**  **(kg)** | **Total amount**  **of N from fertiliser**  **to be applied**  **to field(s)**  **(kg)** | **Total**  **amount**  **of N**  **to be**  **applied to**  **field(s)**  **(kg)**  **(H)+(K)** |
| **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** | **(M)** |
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\* refers to Annexes H and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **7** | **Planning the amount of phosphate (P2O5) to be applied to crops including grass** |

Where no chemical P2O5 fertiliser is to be applied, there is no legal obligation to demonstrate a crop requirement for P2O5 from application of livestock manures. You are only required to complete this table if you are planning to apply chemical phosphate (P2O5) fertiliser.

1. All organic manures, **including livestock manures**, must be taken into consideration.
2. The values for available P2O5 content of organic manures vary depending on soil phosphorus (P) index and crop type.
3. The P2O5 content of chemical fertilisers is taken to be 100% available.
4. When applying nutrients to grass or crops remember to consider all nutrients such as potash and sulphur.

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| **Column (A)** | Identify the crop to be grown. A list of the main crops and their requirements are listed in Annex J of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet. |
| **Column (B)** | Enter area of field. |
| **Column (C)** | Enter Soil P index from soil analysis if available. (If not available then assume an index of 2+). |
| **Column (D)** | According to the soil P index found on soil analysis results enter the P2O5 requirement in kg/ha from Annex J of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet. |
| **Column (E)** | Enter the type(s) of organic manure**, including livestock manure,** to be applied. |
| **Column (F)** | Enter in the amount of manure to be applied in m3 or tonnes. |
| **Column (G)** | Enter the available P2O5 content (per m3 or tonne of manure) of the manure to be applied (Annex G of the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet). |
| **Column (H)** | Multiply columns (F) and (G) to give total amount of available P2O5 to be applied in organic manures. |
| **Column (I)** | Enter the type of chemical fertiliser to be applied. |
| **Column (J)** | Enter the amount of chemical fertiliser to be applied per ha. |
| **Column (K)** | Enter the amount of chemical P2O5 to be applied. For example type of fertiliser to be applied was 27:6:12, this contains 6% P2O5. If 300 kg is to be applied per ha then the amount of P2O5 would be 6 x 300 ÷ 100 = 18 kg per ha. |
| **Column (L)** | Add column (H) and (K) to give total amount of available P2O5 to be applied per ha and divide by the area of the field (B) to calculate the application rate per ha. |

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| **7** | **Planning the amount of phosphate (P2O5) to be applied to crops including grass** (continued) |
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| **Phosphate (P**2**O**5**) planning sheet** | | | | | | | | | | | | |
| **Grass/Crop details** | | | | | **Organic manure**  **(includes livestock manures)** | | | | **Chemical (P2O5) fertiliser** | | | **Total P**2**O**5 **to be applied per ha**  **(kg)**  **((H)+(K)) divided by (B)** |
| **Field**  **No.** | **Crop** | **Area**  **of**  **Crop**  **(ha)** | **Soil P**  **index**  **(from**  **analysis)** | **P**2**O**5  **requirement**  **by crop**  **kg per ha**  **according**  **to soil P**  **index**  **Annex J\*** | **Type**  **of**  **organic**  **manure**  **to be**  **applied**  **Annex G\*** | **Total**  **amount**  **of**  **organic**  **manure**  **to be**  **applied**  **(m3 or t)** | **Available P**2**O**5  **content**  **of organic**  **manure**  **to be**  **applied**  **(kg per m3 or t)**  **Annex G\*** | **Total**  **amount**  **of available P**2**O**5  **supplied**  **to crop**  **in organic**  **manure**  **(kg)**  **(F) x (G)** | **Type**  **of**  **fertiliser**  **product**  **to be**  **applied** | **Total**  **amount**  **of**  **fertiliser**  **product**  **to be**  **applied**  **(kg)** | **Total**  **amount**  **of P**2**O**5 **from fertiliser**  **to be**  **applied**  **(kg)**  **(I) x (J)** |
|  | **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** |
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m3 = 220 gallons

1 hectare=2.47 acres

\* refers to Annexes J and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| **7** | **Planning the amount of phosphate (P2O5) to be applied to crops including grass** (continued) |

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| **Phosphate (P**2**O**5**) planning sheet** | | | | | | | | | | | | |
| **Grass/Crop details** | | | | | **Organic manure**  **(includes livestock manures)** | | | | **Chemical (P2O5) fertiliser** | | | **Total P**2**O**5 **to be applied per ha**  **(kg)**  **((H)+(K)) divided by (B)** |
| **Field**  **No.** | **Crop** | **Area**  **of**  **Crop**  **(ha)** | **Soil P**  **index**  **(from**  **analysis)** | **P**2**O**5  **requirement**  **by crop**  **kg per ha**  **according**  **to soil P**  **index**  **Annex J\*** | **Type**  **of**  **organic**  **manure**  **to be**  **applied**  **Annex G\*** | **Total**  **amount**  **of**  **organic**  **manure**  **to be**  **applied**  **(m3 or t)** | **Available P**2**O**5  **content**  **of organic**  **manure**  **to be**  **applied**  **(kg per m3 or t)**  **Annex G\*** | **Total**  **amount**  **of available P**2**O**5  **supplied**  **to crop**  **in organic**  **manure**  **(kg)**  **(F) x (G)** | **Type**  **of**  **fertiliser**  **product**  **to be**  **applied** | **Total**  **amount**  **of**  **fertiliser**  **product**  **to be**  **applied**  **(kg)** | **Total**  **amount**  **of P**2**O**5 **from fertiliser**  **to be applied**  **(kg)**  **(I) x (J)** |
|  | **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** |
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m3 = 220 gallons

1 hectare=2.47 acres

\* refers to Annexes J and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

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| --- | --- |
| **7** | **Planning the amount of phosphate (P2O5) to be applied to crops including grass** (continued) |

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| **Phosphate (P**2**O**5**) planning sheet** | | | | | | | | | | | | |
| **Grass/Crop details** | | | | | **Organic manure**  **(includes livestock manures)** | | | | **Chemical (P2O5) fertiliser** | | | **Total P**2**O**5  **to be**  **applied**  **per ha**  **(kg)**  **((H)+(K))**  **divided**  **by (B)** |
| **Field No.** | **Crop** | **Area**  **of**  **crop**  **(ha)** | **Soil P**  **index**  **(from**  **analysis)** | **P**2**O**5  **requirement**  **by crop**  **kg per ha**  **according**  **to soil P**  **index**  **Annex J\*** | **Type**  **of organic**  **manure**  **to be**  **applied**  **Annex G\*** | **Total amount**  **of**  **organic**  **manure**  **to be**  **applied**  **(m3 or t)** | **Available P**2**O**5  **content**  **of organic**  **manure**  **to be**  **applied**  **(kg per m3 or t)**    **Annex G\*** | **Total**  **amount**  **of available P**2**O**5  **supplied**  **to crop**  **in organic**  **manure**  **(kg)  (F) x (G)** | **Type**  **of**  **fertiliser**  **product**  **to be**  **applied** | **Total**  **Amount**  **of**  **fertiliser**  **product**  **to be**  **applied**  **(kg)** | **Total**  **amount**  **of P**2**O**5 **from fertiliser**  **to be**  **applied**  **(kg)**  **(I) x (J)** |
|  | **(A)** | **(B)** | **(C)** | **(D)** | **(E)** | **(F)** | **(G)** | **(H)** | **(I)** | **(J)** | **(K)** | **(L)** |
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m3 = 220 gallons

1 hectare=2.47 acres

\* refers to Annexes J and G in the NAP 2015-2018 and Phosphorus Regulations Guidance Booklet.

|  |  |
| --- | --- |
| **8** | **Description and animal housing** |

What type of animal housing is on your farm?

Slurry based

Straw bedded

|  |
| --- |
|  |
|  |
|  |
|  |

If other please specify

|  |  |
| --- | --- |
| **9** | **Description and volume of manure storage** |
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| --- | --- | --- | --- | --- | --- |
| Tank | Description | Length  **l**  (m) | Breadth  **b**  (m) | Adjusted depth  **d**  (m)  (Depth – freeboard)(i) | Volume of facilities  (**l** x **b** x **d**)  (m3) |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| Total capacity of rectangular tanks and lagoons/middens | | | | |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tank | Description | Radius  **rad**  (m) | Adjusted height **h** (m) (Height – freeboard) (i) | Volume of facilities for slurry **=3.14** x **rad** x **rad** x **h** (m3) |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| Total capacity of above ground circular stores | | | |  |

(i) Freeboard is the term given to the unfilled depth (safety margin) at the top of a slurry tank or compound. Freeboard allowances are 750mm for earth bank lagoons and 300mm for all other slurry structures. Freeboard is not a legal requirement for structures which are exempt under the NAP 2014 Regulations (structures completed before 1 December 2003, unless substantially reconstructed). It is, however, considered best management practice to adhere to freeboard requirements in all structures.

**Contact details**

**Department of Agriculture and Rural Development (DARD)**

Internet**:** [**www.dardni.gov.uk**](http://www.dardni.gov.uk)

**Environment 0845 30 44 502**

**Education and Training 0845 30 44 501**

**Department of the Environment (DOE)**

**Northern Ireland Environment Agency**

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Nitrates Regulations 028 9262 3188

Water Pollution Hotline (*A 24-hour confidential hotline for reporting pollution incidents*) 0800 80 70 60 Fax Number 028 9267 6054

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